Tait Electronics Ltd.

T800 PROGRAMMING USER'S GUIDE

TAIT T800

PROGRAMMING

USER'S GUIDE

T800 PROGRAMMING SOFTWARE

PGM800 Version 2.01

PGM800CF Version 1.01

USER'S GUIDE

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TAIT ELECTRONICS LTD.
CHRISTCHURCH,
NEW ZEALAND.

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CHAPTER 1

1. Introduction

1.1. PGM800 package (previously known as BASEPROG).

PGM800 is a comprehensive software package designed to allow easy programming of TAIT T800 series base stations.

The base stations supported by PGM800 are:

Base Station	Normal Freq	Permitted Freq	Freq. steps
T825	66-88MHz	64-90MHz	6.25kHz & 5.00kHz
T827	66-88MHz	64-90MHz	6.25kHz & 5.00kHz
T835	136-156MHz	133-159MHz	6.25kHz & 5.00kHz
	148-174MHz	145-177MHz	6.25kHz & 5.00kHz
T836	136-156MHz	133-159MHz	6.25kHz & 5.00kHz
	148-174MHz	145-177MHz	6.25kHz & 5.00kHz
T837	136-156MHz	133-159MHz	6.25kHz & 5.00kHz
	148-174MHz	145-177MHz	6.25kHz & 5.00kHz
T851	400-440MHz	390-450MHz	12.5kHz or 6.25kHz
	440-480MHz	430-490MHz	12.5kHz or 6.25kHz
	480-520MHz	470-530MHz	12.5kHz or 6.25kHz
T855	400-440MHz	390-450MHz	12.5kHz or 6.25kHz
	440-480MHz	430-490MHz	12.5kHz or 6.25kHz
	480-520MHz	470-530MHz	12.5kHz or 6.25kHz
T856	400-440MHz	390-450MHz	12.5kHz or 6.25kHz
	440-480MHz	430-490MHz	12.5kHz or 6.25kHz
	480-520MHz	470-530MHz	12.5kHz or 6.25kHz
	480-512.29375MHz	480-512.29375MHz	6.25kHz only
T857	400-440MHz	390-450MHz	12.5kHz or 6.25kHz
	440-480MHz	430-490MHz	12.5kHz or 6.25kHz
	480-520MHz	470-530MHz	12.5kHz or 6.25kHz
	480-512.293750MHz	480-512.29375MHz	6.25kHz only
T881	800-880	790-890MHz	
	850-960	830-980MHz	12.5kHz
T885	800-880	790-890MHz	12.5kHz
	850-960	830-980MHz	

The menu driven environment is easy to use and offers great flexibility to the user. Moving between menus and within menus using the cursor keys is simple. Help information is available at every step if required.

PGM800 allows user specified channel information to be saved onto disk and retrieved at any time. This is then used in conjunction with a separate EPROM programmer to transfer the information to an EPROM for installation in the base station itself.

Data from the saved files or from a base station may be printed, providing you with a permanent copy for your own records.

Note: A separate user supplied EPROM programmer must be used. It should be capable of programming from Intel Hex or Binary files.

1.2. New Features in PGM800 Version 2.01

PGM800 is an updated and expanded version of the earlier BASEPROG software.

PGM800 Version 2.01 includes many new and improved features over BASEPROG Version 1.0. There are a number of changes to the basic user interface to make data entry and editing significantly easier, and additional facilities to allow programming of CTCSS frequency for individual channel. Major changes are outlined below:-

* Full support for different display adapters. Automatic detection of colour or monochrome adapters has been added and user configurable colours are available.

* Programming of CTCSS frequency data (optional) for individual channel.

* Full cursor control in [EDIT] mode. Full cursor movement around the data screen is now possible.

* User selectable output file format, Intel Hex or Binary formatted.

* Support of a wider range (more variants) of T800 base stations.

* DOS shell facility implemented.

* CTCSS tone code
Whenever CTCSS tone is not selected, the T800-07 will provide a CTCSS code of (MSB) 0000000010 (LSB) instead of $FF in the earlier versions. This allows defeat of the CTCSS.

* Channel Numbering
  All channel numberings have been changed from 0-127 to 1-128.

* Printout
  An "X" is printed on the printout as the MSB of the DIP switch. This indicates clearly to the user that there are 8 switches on the DIP and the state of the MSB is dependent on the size of EPROM used.

And many other minor enhancements have been added to improve the appearance of the software.

Notes: The datafiles produced by BASEPROG Version 1.0 are still compatible with PGM800 Version 2.01

1.3 Requirements

The base requirements to use PGM800 are:

* IBM PC, XT, AT or true IBM compatible computer.

* 256 Kbytes of RAM

* DOS version 3.0 or higher

* Any 80-column monitor (monochrome, colour, LCD or Plasma).

* One floppy disk drive, although a hard disk with one floppy drive is recommended.

* An EPROM programming device and appropriate software capable of programming an EPROM from an Intel Hex format or Binary file.

To take full advantage of PGM800's features, a printer is also recommended.

1.4 Typographic Conventions

All type faces used in this manual have the following uses:

< > Angle brackets in text or on DOS command lines shows the KEY to push. Text of this sort should not be typed verbatim.

__ Underline represents text you must type (such as command-line).

" " Double quotes represents text as it appears on screen.

CHAPTER 2

2. Before You Start.

2.1. Making a Back-up

The original PGM800 program disk is formatted for double-sided, double-density disk drive and can be read by IBM PC's and close compatibles.

You should make a complete working copy of the original PGM800 program disk when you receive them, then store the original disk in a safe place. Your computers DOS manual will explain how to use the disk copy command supplied with your computer.

2.2. Installing PGM800

Your PGM800 disk contains all the programs necessary to program your T800 base stations.

2.2.1. Install PGM800 on a hard disk

If you have a hard disk on your system, the following steps can be taken to install PGM800 on the hard disk, otherwise go to section 2.3.

First copy PGM800 and its support programs onto your hard disk (e.g. drive C). The following steps can be used:

Step 1: Have the DOS prompt for your hard disk on the screen
e.g. "C:>" or type C: <ENTER>

Step 2: Move to the root directory by typing cd\ <ENTER>at the DOS prompt. Create a new subdirectory by typing md T800 <ENTER>. Go to the new subdirectory by typing cd T800 <ENTER>.

Step 3: Put your floppy disk carrying the programming software in floppy drive A, type
copy a: PGM800*.EXE <ENTER> and you should have at least two files copies across, namely "PGM800.EXE" and "PGM800CF.EXE".

Step 4: Remove the floppy disk to store it in a safe place.

2.3 Setting up PGM800

The colours used by PGM800 are user configurable. The default colours are set to black and white, so that PGM800 can be used with the screen of your computer.

If you have difficulty reading text or dislike the colour of the text displayed by PGM800, you can use the configuration program (PGM800CF) to change the colours used by PGM800 (see Appendix A for how to use PGM800CF).

3. Getting Started

3.1. A Short Example

Now you have installed PGM800 on your system, and you are ready to start programming. At this point, it is appropriate to find out a few basics, for instance, how to start PGM800, how to enter data, how to save the data to an Intel Hex formatted file and so forth.

Brief explanations on how to use PGM800 to perform a simple example will be given. For a comprehensive explanation of the whole PGM800 menu system, please refer to chapter 4 of this guide.

3.1.1. To start PGM800

To start PGM800 from a floppy diskette.

Step 1: Have the DOS prompt for drive A on the screen and put the PGM800 program disk (working copy) in drive A.

Step 2: Type the following commands.

A: >PGM800 <ENTER>

To start PGM800 from a hard disk.

Step 1: After the DOS prompt, type cd\T800 <ENTER> to change to the correct subdirectory, then type PGM800 <ENTER> to start the program.

When it starts up, PGM800 looks for a file called PGM800.CNF in the current directory. This file contains the screen display colour which PGM800 will use. If the file is not found, PGM800 will use its default colours. When you are working on a particular monitor, it is useful to have a copy of PGM800.CNF which contains the colours that suit your personal taste.

Note: PGM800 will use the colours defined in the PGM800.CNF regardless of the colour adapter used in your computer. In other words, if you have difficulty reading the text on the screen, it is likely that the PGM800.CNF in your current directory was configured for a different display adapter. In this case, you could just exit from PGM800, delete PGM800.CNF and restart PGM800. It should now default all text and display to black and white only.

After starting the program, the title screen will be displayed for 2 seconds. It shows the version number, date and copyright information for the software as shown in Fig. 3.1.

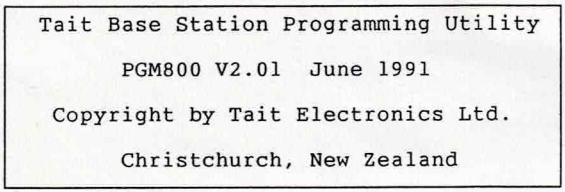

Tait Base Station Programming Utility
PGM800 V2.01 June 1991
Copyright by Tait Electronics Ltd.
Christchurch, New Zealand

Fig. 3.1. Title page of PGM800

After that the main menu appears as shown in Fig. 3.2. You are now all set to go.

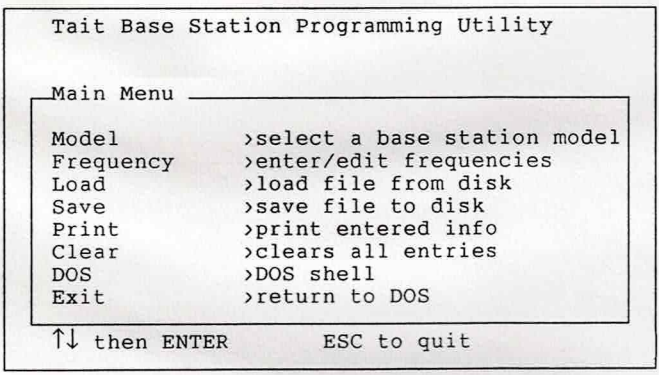

Tait Base Station Programming Utility
Main Menu
Model ›select a base station model
Frequency ›enter/edit frequencies
Load ›load file from disk
Save ›save file to disk
Print ›print entered info
Clear ›clears all entries
DOS ›DOS shell
Exit ›return to DOS
↑↓ then ENTER ESC to quit

Fig. 3.2. Main Menu of PGM800

3.1.2 Information required

The remaining sections of this chapter will provide a step by step demonstration of how to use PGM800. This encompasses:

- how to enter data
- how to save data in an Intel Hex formatted file.
- how to load an existing data file.

The following information is supplied to program a T825-15 base station fitted with T800-02 CTCSS module.

Base Station model:	T825-15 (Receiver)
Serial No. of base station:	1234567
User's remark:	Just testing

Note: CTCSS information can be ignored if the T800 base station does not have a T800-02 CTCSS module fitted, or a particular channel does not require it.

The following frequencies are to be programmed into the corresponding channels:

Channel	Rx (MHz)	CTCSS (Hz)
1	74.005	67.0
2	74.010	
3	78.00625	114.8

A hard copy of the channel information is required and the data is to be stored on disk under the name T800DEMO.HEX.

3.1.3 To Enter data

To select the base station.

* Using the ↑↓ cursor keys to select "model" from the main menu. Then press ‹ENTER›.

A list of base station variants that PGM800 supports will be presented to you to choose from as shown in Fig. 3.3.

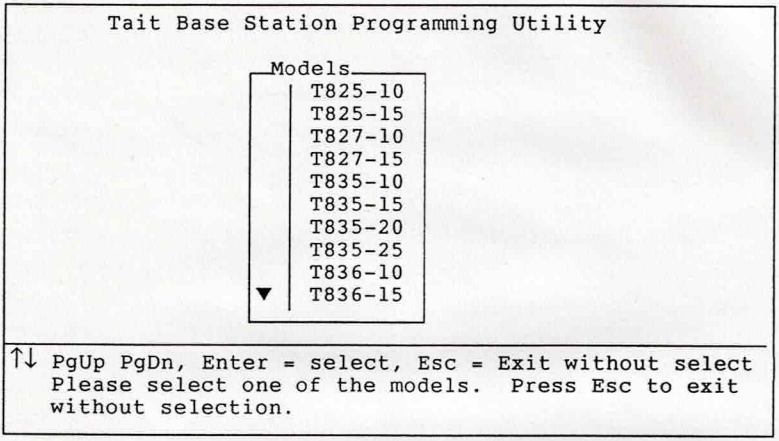


Fig. 3.3. List of base station models supported by PGM800.

* Use the ↑↓ cursor keys to select "T825-15" and press ‹ENTER› PGM800 will then be returned to the main menu with the selected model displayed below the main menu, as well as on the right-hand side of the line at the bottom of the screen.

To enter channel data

* Choose the "Frequency" command from the main menu and press ‹ENTER›. A blank form appears and is ready for data entry after a couple of seconds. The form has room for 128 channel frequencies and 128 CTCSS frequencies.

* With the cursor in the "Rx (MHz)" field of channel 1, type 74.005 and press ‹ENTER›. The cursor moves to the "CTCSS (Hz)" field.

* At this point, you have 2 choices.

  Either - type 67.0 and press ‹ENTER›
  or - Press ‹F1› for help. A list of valid CTCSS frequencies will be displayed. Use the ↑↓ Page Up or Page Dn key to select "67.0" from the list and press ‹ENTER›. "67.0" will automatically be typed into the "CTCSS (Hz)" field.

The cursor then moves the "Rx (MHz)" field of channel 2.

* Type 74.010 and press ‹ENTER› for Rx frequency of channel 2.

* Type ‹ENTER› to ignore the "CTCSS (Hz)" field of channel 2.

* Type 78.00625 and press ‹ENTER› for Rx frequency of channel 3.

* Type 114.8 and press ‹ENTER› for CTCSS frequency of channel 3.

The channel data has now been completely entered as shown in Fig.3.4.

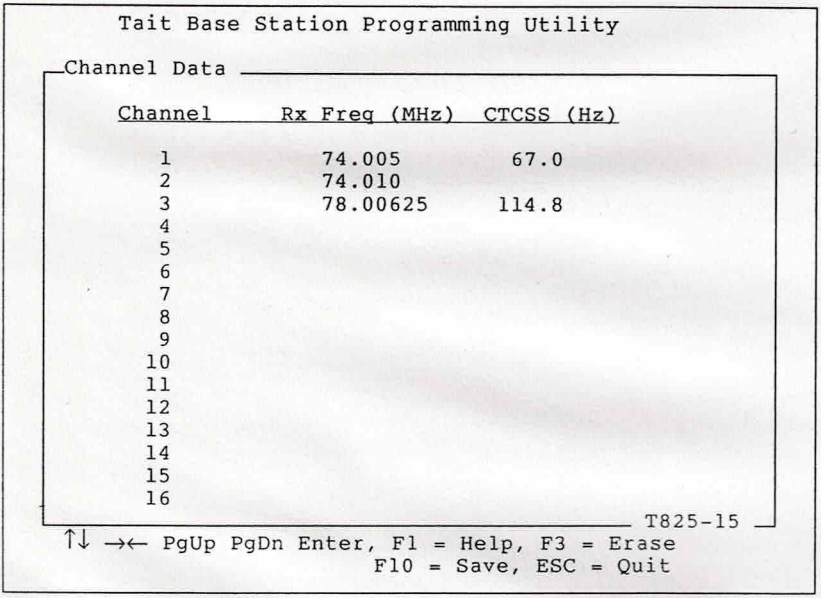


Fig. 3.4 Channel data entry

* Press <F10> to accept all the channel data entered and to return to the main menu.

Note: For data entry, <DEL> deletes a character in the current field and <F3> erases the entire content of the current field.

3.1.4. To save data

* Use the ↑↓ cursor keys to select the "save" command from the menu and press <ENTER>. PGM800 will then prompt you for the name of the file to which you want to save the entered data. The default or suggested filename is T825_15.HEX, but for this example, we shall save the data to T800DEMO.HEX.

Note: The .HEX extension is used if your EPROM programmer accepts INTEL HEX format files. Alternatively, .BIN extension can be used if your EPROM programmer accepts BINARY formatted files.

* Type T800DEMO.HEX and press <ENTER>. The cursor moves to the "Base Station Serial No." field.

* Type 1234567 and press <ENTER> The cursor moves to the "User's remark" field.

* Type Just testing and press <ENTER>. The cursor moves to the "Save on disk Y/N" field.

* We want to save the data on the disk, so press <ENTER>.
See Fig.3.5.

```
          Tait Base Station Programming Utility

 <File saver T825-15>
 ┌──────────────────────────────────────────┐
 │ Filename (.HEX or .BIN):   T800DEMO.HEX  │
 │ Base Station Serial No.:   1234567       │
 │ User's remark          :   Just testing  │
 │ Save on disk Y/N       :   Y             │
 └──────────────────────────────────────────┘
                Selected model:  T825-15

                                          T825-15
 ↑↓ →← PgUp PgDn Enter, F3 = Erase, F10 = Main Menu
  Answer 'Y' if saving should be done.
  'N' prohibits any saving
```

Fig. 3.5. Filesaver

* Press <F10> to accept the information just entered. You will see the following messages.

  - Prepare data.. PGM800 converts the data entered into a suitable format for the base station.

  - Saving data to T800DEMO.HEX Please wait. PGM800 saves the data on the file

  - Data has been successfully written to T800DEMO.HEX

* ..Press any key.. to return you to the main menu.

* Next we will demonstrate how to load the data from a file. In order to do that we must first clear the entered data just as if PGM800 has just been started. This can be done by choosing "CLEAR" command from the main menu and pressing <ENTER>. You will be asked to confirm your intention:

  clear all entries in memory Y/N?:

* Type Y and the main menu is returned. The previously selected model is cleared.

3.1.5. To load data from a file

* Select "Load" from the main menu and press <ENTER>. PGM800 will then prompt you for the name of the file from which you want to load the data.

* Type T800DEMO.HEX and press <ENTER>.

  A message, "Reading data from T800DEMO.HEX" will be displayed briefly while the data is being read from the file. The main menu will then be returned, displaying the base station model that has been read from the file.

  To check that the file has been correctly loaded.

* Using the ↑↓ cursor keys to select the "frequency" command from the main menu. The data should be those that you have entered before.

3.1.6. **To print data**

To produce a printed copy of the channel information.

* Power up your printer making sure that it is on-line.
* Select "Print" from the main menu and press <ENTER>.
* The printer will then print a hard copy of the data entered.
* A message, "Printing in progress..." is displayed during printing, after which you will be returned to the main menu.

Fig. 3.6 shows the printed copy of the channel information for the above short example. The "DIP" column shows the setting of DIP switch in the base station for selecting the corresponding channel.

```
TAIT BASE STATION PROGRAMMING UTILITY

Date                  :   10 June 1991.
Base Station Model    :   T825-15
Frequency step        :   6.250 or 5.0KHz
Base Station Ser. No.:    1234567
User's Remark         :   Just testing
-------------------------------------------------------------------
Channel  Rx frequency (MHz)     CTCSS freq. (Hz)  DIP (1 = ON
                                                      0 = OFF)
  1          74.00500                  67.0          X1111111
  2          74.01000                   0.0          X1111110
  3          78.00625                 114.8          X1111101
```

Fig. 3.6. The printout of the above short example.

3.2. What you have achieved

Now exit from PGM800 (choose the exit command from the main menu or just press ‹ESC› key. Let's see what you have created.

At the DOS prompt, type dir *.HEX and press ‹ENTER›. You will see a file called T800DEMO HEX. This file contains channel information and can be transfered to an EPROM with a suitable EPROM programmer.

Following the supplier's instructions will result in a correctly programmed EPROM for your T825-15 base station.

CHAPTER 4

4. Menu Commands

Before we describe the various menu options available to you, we suggest that you take a few minutes to go through the commonly used keys in PGM800. These keys together with their functions are listed in table 4.1.

While you are in PGM800, there is a quick reference line displayed at the bottom of the screen which provides an at-a-glance key reference for your current position.

When you are in channel data entry, the default quick reference line looks like this:

↑↓ →← PgUp PgDn enter, F1 = Help, F3 = Erase, F10 = Save, ESC = Quit.

Key	Function
F1	Brings up a help window with information about the current field.
F3	When the cursor is in a field, this key will erase the current content of the field.
F10	Accepts all data and returns to main menu.
→	In data entry mode: Accepts the current entered valid data and advances the cursor to the next sequential field. It wraps around from the last to the first field.
←	In data entry mode: Accepts the current entered valid data and moves the cursor to the previous field. It wraps around from the first to the last field.
↑	In a menu: moves the selecting bar up in a menu or list of items. It wraps around from the first to the last item. In data entry mode: Moves the cursor into the field directly above the current field, whilst accepting the validated data of the current field. It wraps around from the first to the last appropriate item.

↓	In a menu: moves the selecting bar down in a menu or list of items. It wraps around from the last to the first item. In data entry mode: Moves the cursor into the field directly below the current field, whilst accepting the validated data of the current field. It wraps around from the last to the first appropriate item.
<ENTER>	In a menu: Selects a menu command or a listed item. In a data entry mode: confirms data entry in the current field and advances the cursor to the next sequential field.
<ESC>	In a menu: Leaves the menu without making a selection. In data entry mode: Aborts the data entry after confirmation, and returns to the main menu without saving any changes.
<Page Up>	Moves the cursor to the previous page of data or information if any.
<Page Dn>	Moves the cursor to the next page of data or information if any.
<DEL>	Deletes one character in the current field.
<INS>	Toggles insert editing mode in the current field.

Table 4.1 Commonly used keys.

4.1. **Frequency**

This option allows you to enter data for 128 different channels. There are two parameters for each channel.

* The receiver (Rx) or Transmitter (Tx) frequency in MHz
* The CTCSS frequency in Hz.

Both parameters are optional.

Receive or Transmit frequency

This field specifies the frequency which the base station receives or transmits on the corresponding channel. The normal frequency band for each base station model selected is given in Chapter 1. It is also displayed in the help window when <F1> is pressed with the cursor in this field.

The entered frequency must be divisible by the reference frequency of the base station. Some base stations can be programmed with one of two possible frequencies, such as 5.00KHz and 6.25KHz. In this case, the entered frequencies must be divisible by either one of the reference frequencies. Otherwise an error message is generated and the entered frequency is cleared. If the entered frequency is divisible by both reference frequencies, then the higher of the two will be automatically selected.

On each side of the frequency band, there is a permitted range of frequencies. A typical value for the permitted range would be 10MHz. Any entered frequency which is divisible by the reference frequency, outside the normal band but within the permit range will be accepted with a warning message.

Any frequency entered which is outside of the permitted range of the frequency band will generate an error and the entered frequency will be cleared.

CTCSS Frequency

This field specifies the CTCSS frequency to be used for the corresponding channel if a T800-02 CTCSS module has been installed in the base station.

The entered CTCSS frequency is checked against a look-up table. An error message is generated if an invalid CTCSS frequency has been entered.

A list of valid CTCSS frequencies is displayed for you to choose from if <F1> is pressed with the cursor in the "CTCSS frequency" field.

Channels may be programmed without a corresponding CTCSS frequency if desired. In this case the EPROM will be automatically programmed to provide MSB 0000000010 LSB output from the T800-07. This is detected within the T800-02 CTCSS unit and used to defeat the CTCSS (later model CTCSS units only: PCB issue 225-01202-02 onwards).

4.2. Load

This option allows you to load into PGM800 any file, with extension .BIN or .HEX, that was produced by PGM800 Version 2.01. Additionally, files produced by the earlier version of the program (BASEPROG) can also be loaded. Enter the complete name (include directory path if appropriate) of the file you want to load. If it cannot be found or is in an incorrect format, an error message will be displayed at the bottom of the screen. If PGM800 already holds working data, it will be overwritten, after confirmation.

(For a directory listing, the '*' wildcard character may be used, e.g. B:*.BIN All the files on drive B that have file name extension .BIN will be displayed).

"Reading from ‹filename›... Please wait" will be displayed briefly and then it returns to the main menu with the selected model displayed if the file has been read successfully.

Pressing the ESC or ‹ENTER› key when no filename is specified takes you back to the main menu without load.

Note: The file name extension is very important here. LOAD will only accept filenames with the .HEX (signifying Intel Hex formatted file) or .BIN (signifying Binary file) extensions. Any other extension will generate an error.

4.3. Save

This option allows you to save all the entered data in a file on disk. Enter the complete filename (include directory path if appropriate) of the file you want to save the data to (e.g. b:DEMO.HEX will save all the data to a file called DEMO.HEX on drive b). If the named file already exists, you will be asked if it should be overwritten. 'N' will prohibit save and will prompt you for another filename.

The filename extension is very important here. Save will only accept filenames with the .HEX (output Intel HEX formatted file) or .BIN (Output binary file) extensions. Any other extension will generate an error.

(For a directory listing, the '*' wildcard character may be used e.g. B:*.BIN, all the files on drive B that have filename extension .BIN will be displayed).

If an error is encountered whilst saving data to a file, an error message will be displayed. It will return you to the main menu if the data has been successfully saved to the specified file.

Pressing the ESC or ‹ENTER› key when no filename is specified, will take you back to the main menu without save.

Note: After the file has been created, it is necessary to transfer this information to an EPROM using an EPROM programmer.

4.4 Print

This option prints all entered data if any, on a printer. If a printer error is detected, a message "printer not ready" will be displayed at the bottom of the screen.

4.5. Clear

This option clears all entered data and PGM800 will be as if you have just started. If data is already entered or loaded you will be asked if it should all be cleared. "N" will prohibit clear and return you to the main menu.

4.6. DOS Shell

Access to DOS is available without exiting from PGM800. Select "DOS" from the main menu and press ‹ENTER› will display a window in which you can perform various DOS activities such as deleting unwanted data files, programming EPROM and so forth.

Type Exit ‹ENTER› at the DOS prompt will return you to PGM800. The previously entered data remains unaltered.

Note that when PGM800 is running on a floppy drive only system, DOS shell will not work unless the PGM800 program diskette in drive A is replaced by a DOS system diskette containing "command.com" before the "DOS shell" command is invoked. Remember to reinsert the PGM800 program diskette in drive A before returning to PGM800.

4.7 EXIT

This option is used at the end of the session to return to DOS. Note that all data must be saved to prevent loss.

CHAPTER 5

5. Error and Warning Messages

PGM800 diagnostic messages fall into two classes; errors and warnings. These messages are displayed at the bottom of the screen as they occur. A tone is also generated for each error or warning message. Errors indicate invalid data entered, illegal conditions, or an incorrect order of data entry attempted. All error messages are preceded by "Error".

Warnings do not prevent you from proceeding. They indicate a frequency entered that is outside the normal band and thus requires your attention. Data entered with a warning message will be accepted and processed accordingly. All warning messages are preceeded by "Warning".

In the following lists, messages are presented alphabetically within message class. A probable cause and remedy are provided for each message.

	Error Messages	Possible causes	Possible remedies
1.	Can't change model now, clear first.	A model has already been chosen.	Select "Clear" command from the main menu and press ‹ENTER›. Type Y after the confirmation prompt.
2.	Can't open ‹filename›	short of memory Illegal filename used.	Try using a new diskette Use a different filename.
3.	Fail to read from ‹filename›	Datafile with unknown format EOF found unexpectedly Datafile corrupted.	Check filename Give up
4.	Fail to set up frequency entry form.	Not enough memory space.	Make sure your system has at least 256K RAM, if so, try reset the computer.
5.	Fail to write to ‹filename›	Not enough memory on disk.	Try save it to a different disk.
6.	Fatal error in on-line status/help function	System error	Try reset the computer.
7.	Filename must have extension .HEX or .BIN	Either no filename extension or wrong filename extension specified.	Alter or add filename extension
8.	‹filename› no such file or directory or ‹filename› not found	Attempt to read a non-existent file.	Check filename Type *.BIN or *.Hex to get a directory listing of the file present.
9.	Frequency of channel n not divisible by either freq. step.	The model read from the file is supposed to accept 2 freq. steps but the freq. of channel n is found to be not divisible by either freq. step suspect datafile corrupted.	Try to read the file again
10.	Frequency of channel n not divisible by freq. step.	Same as 9.	See 9 above
11.	Highest frequency for ‹basestation› = x MHz	Frequency entered exceed the highest permitted freq.	Enter a frequency with the permisible band. Press ‹F1› for help.
12.	Invalid CTCSS freq.	CTCSS freq. not supported by PGM800	Press ‹F1› for a list of CTCSS frequencies.

	Error Message	Possible causes	Possible remedies
13.	Lowest freq. for ‹basestation› = x MHz	Freq. entered below the lowest permitted freq.	See 11 above
14.	Not a multiple of x KHz	x is the freq. step of the base-station All channel freqs. must be divisible by x.	Enter a channel freq. that is divisible by the freq. step.
	All channel freqs.	must be divisible by x.	the base station.
15.	Please select a model first	No model has been selected	Select "model" from the main menu.
16.	Printer #1 not ready	Printer not ON or not on-line or not connected	Make sure the printer is powered up and on-line. If still not successful, try to print something else.
17.	Unknown base station model read from ‹filename›	Read a Hex formatted datafile as a binary formatted file.	Check filename

	Warning message	Possible causes	Check
1.	Highest freq. for ‹base station› = x MHZ.	Freq. entered exceeds the highest normal freq. band but within the permissible range.	Is this O.K?
2.	Lowest freq. for ‹base station› = x MHz	Freq. entered falls below the lowest normal freq. band but within the permissible range.	Is this O.K?
3.	‹filename› already exists.	A datafile with the same file name already exists	The file will be overwritten if the filename is not changed.

APPENDIX A

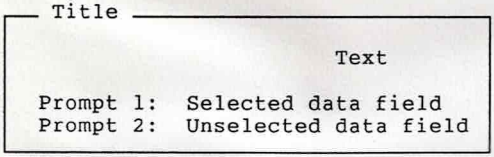
SCREEN COLOUR CONFIGURATION

On the original program disk is a file called PGM800CF.EXE. This is a file which, when run, allows the user to configure the screen colours and attributes to suit a desired preference. If not used then a default set of attributes is selected.

How to use PGM800CF

To run the screen configuration program type PGM800CF <ENTER>. A screen as shown below is displayed:

PGM800 Configuration - Display colour selection Version 1.01



On a monochrome monitor, use the following Function Keys to change colours/attributes that PGM800 uses.

F1	Main screen
F2	Border
F3	Title
F4	Text
F5	Selected prompt (Prompt 1)
F6	Unselected prompt (Prompt 2)
F7	Selected data field
F8	Unselected data field
F10	Exit and save changes
ESC	Exit and throw away changes.

For a colour monitor additional features are offered and the screen appears thus.

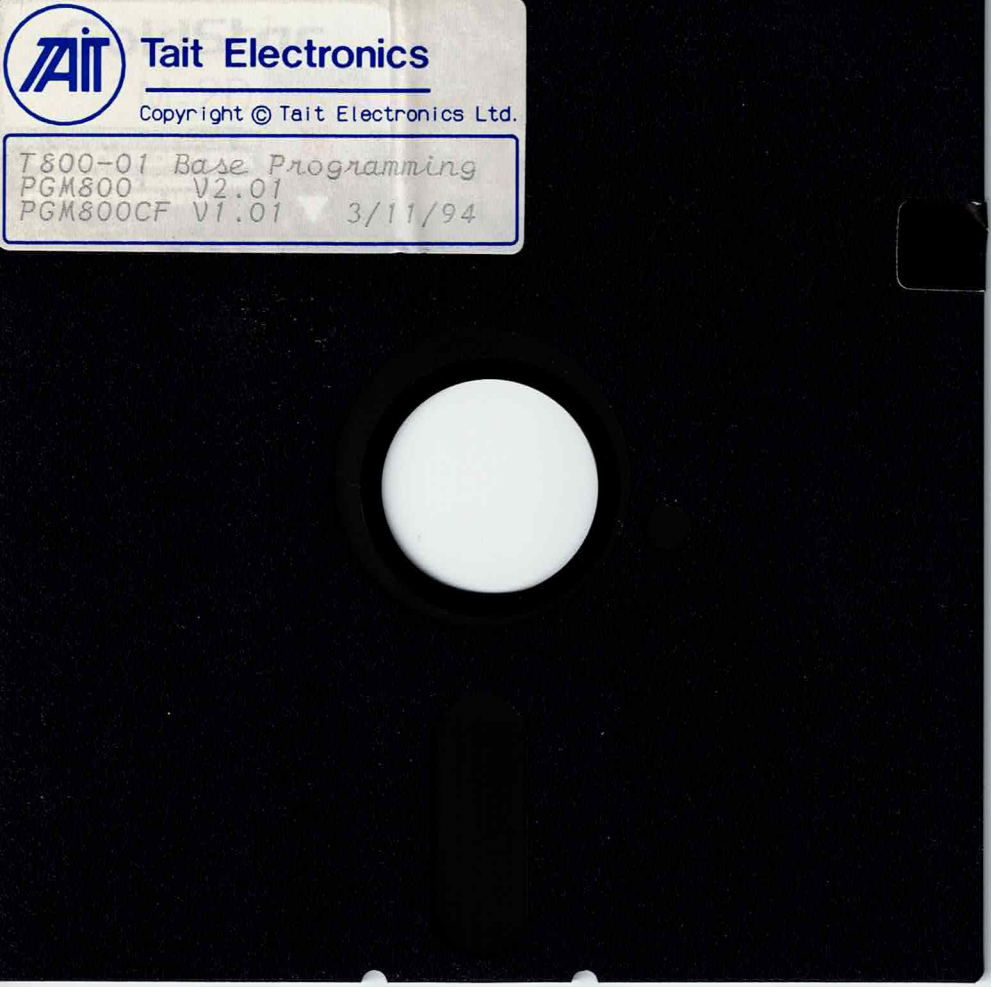
Foreground	Background/attribute	
	Shift F1	Main screen
F2	Shift F2	Border
F3	Shift F3	Title
F4	Shift F4	Text
F5	Shift F5	Selected prompt (Prompt 1)
F6	Shift F6	Unselected prompt (Prompt 2)
F7	Shift F7	Selected data field
F8	Shift F8	Unselected data field.

F10 Exit and save changes
ESC Exit and throw away changes.

The top half of the screen displays an example of the different types of text/boarders/backgrounds etc. used in PGM800. To change any of these colours or attributes then press the corresponding function key ‹F1› - ‹F8› as shown in the menu for monochrome systems or ‹F1› - ‹F8› and ‹SHIFT› ‹F1› - ‹SHIFT› ‹F8› for colour systems.

For example, if you wish to change the title colour then press ‹F3›. The effect of this will be shown. Further pressing of ‹F3› results in a scrolling through of the colours available.

To save the changes and exit from the program press ‹F10› or press ‹ESC› to exit from the program without saving any changes. If ‹F10› is used, the colour data will be stored in a file called PGM800.CNF, this data will be read by PGM800 at the start of the next programming session.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T800-01 Base Programming
PGM800 V2.01
PGM800CF V1.01 3/11/94